

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/15034

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl.<sup>7</sup> B29D30/26, B29D30/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.<sup>7</sup> B29D30/20, B29D30/26, B65G35/06, B65G35/08, B61F11/00,  
B61F13/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1926-1996	Toroku Jitsuyo Shinan Koho	1994-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Jitsuyo Shinan Toroku Koho	1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	JP 2002-254529 A (Toyo Tire and Rubber Co., Ltd.), 11 September, 2002 (11.09.02), Claims; Par. Nos. [0008] to [0012], [0017], [0029], [0036], [0037]; drawings (Family: none)	9-13, 16 14, 15
X Y	JP 2002-326288 A (Toyo Tire and Rubber Co., Ltd.), 12 November, 2002 (12.11.02), Claims; Par. Nos. [0031], [0032]; drawings (Family: none)	9-13, 16 14, 15

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:  
"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier document but published on or after the international filing date  
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
"O" document referring to an oral disclosure, use, exhibition or other means  
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
"&" document member of the same patent family

Date of the actual completion of the international search  
23 February, 2004 (23.02.04)

Date of mailing of the international search report  
09 March, 2004 (09.03.04)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2001/39963 A1 (PIRELLI PNEUMATICI S.P.A.), 07 June, 2001 (07.06.01), Claims; drawings & JP 2003-515474 A	14, 15
Y	JP 8-11232 A (Bridgestone Corp.), 16 January, 1996 (16.01.96), Par. No. [0090] (Family: none)	14, 15
A	EP 555813 A1 (PIRELLI COORDINAMENTO PNEUMATICI), 18 August, 1993 (18.08.93), Claims; drawings & US 5411626 A & DE 69314067 C & ES 2109380 T & IT 92500269 A & JP 6-894 A	1-16
A	WO 2002/016118 A1 (FUJI SEIKO CO., LTD.), 28 February, 2002 (28.02.02), Claims; drawings & EP 1312462 A1 & JP 2002-307570 A	1-16
A	US 4314864 A (THE FIRESTONE TIRE & RUBBER), 09 February, 1982 (09.02.82), Claims; drawings & EP 39621 A2 & DE 3177114 D & ES 501917 A & JP 61-167539 A	1-16
A	JP 4-14437 A (Bridgestone Corp.), 20 January, 1992 (20.01.92), Claims; drawings (Family: none)	1
A	JP 2522672 Y2 (Ishikawajima-Harima Heavy Industries Co., Ltd.), 22 October, 1996 (22.10.96), Claims; drawings (Family: none)	1
P, A	JP 2003-39573 A (Bridgestone Corp.), 13 February, 2003 (13.02.03), Claims; drawings (Family: none)	1-8
P, A	EP 1295701 A2 (THE GOODYEAR TIRE & RUBBER CO.), 26 June, 2003 (26.06.03), Claims; drawings & CA 2403525 A & CN 14102552 A & JP 2003-103649 A	1-16

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## Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:

because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The group of inventions described in Claims 1 - 8 relates to a tire forming system wherein an endless rail is composed of at least one linear portion and one arcuate portion, the two portions being smoothly connected, the rail width of the arcuate portion being made narrower than the rail width of the linear portion by an amount corresponding to the radius of curvature of the arcuate portion. The group of inventions described in Claims 9 - 15, 16 relates to a tire molding system having a toroidal forming drum having a bead lock for fixing a pair of bead cores and an expansion-contraction displaceable rigid core body radially supporting a carcass band toroidally bulged between (continued to extra sheet)

☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

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Continuation of Box No.II of continuation of first sheet(1)

the two bead cores, and a molding carriage for rotatably supporting the toroidal molding drum.